

## ABSTRACT

An adaptive clocking mechanism is provided for a digital display system. The digital display system includes a clock recovery system, for recovering a system time clock from a video bit-stream generated at an encoder, and a decoding system for  
5 decoding and decompressing the video bit-stream at a frame rate. The adaptive clocking mechanism operates to determine, from video format information transmitted from the encoder, the occurrence of a frame rate at which a transmitted signal is encoded that differs from a frame rate expected by the decoder. Upon such a determination, the adaptive clocking mechanism further operates to select a modifier  
10 from a group of modifiers based on format information derived from the video bit-stream, including the encoded frame rate. The selected modifier is then applied to a synchronization function of the decoder in a manner to bring the decoder operation into synchronization with the non-expected encoder frame rate.